

**REMARKS**

**Present Status of the Application**

This is a full and timely response to the outstanding Office Action mailed on June 13, 2008. The Office Action has rejected claims 2, 7, 10-11, 56-59 and 62 under 35 USC 103(a) as being unpatentable over Tanada et al. (Tanada hereinafter, US Publication 2002/0054257) in view of Nakai et al. (Nakai, hereinafter, U.S. Patent No. 6,144,429). The Office Action has also rejected claims 2, 7, 10-11, 56-59 and 62 under 35 USC 103(a) as being unpatentable over Tanada in view of Ogawa et al. (Ogawa hereinafter, U.S. Patent No. 6,122,027) and further in view of Nakai.

In response thereto, Applicants have amended claims 56, 59 and 62, rewritten claims 2, 7, 10, 11 as claims 63-66 and newly added claims 67 to better clarify the claimed invention. Upon entry of the amendments, claims 56-67 remain pending. It is believed that no new matter is added by way of these amendments made to the claims or otherwise to the application.

After carefully considering the remarks set forth in this Office Action and the cited references, it is strongly believed that the cited references are deficient to adequately teach the claimed features as recited in the amended claims. The reasons that motivate the above position of the Applicants are discussed in detail hereafter, upon which reconsideration of the claims is most earnestly solicited.

### **Interview Summary**

The undersigned would like to thank Examiner Rude for granting a telephonic interview on August 13, during which the 35 USC 103 rejection was discussed. More particularly, the undersigned and the examiner discussed the rejections and the teachings of the Tanada and Nakai references. Unfortunately, no agreement was reached during this interview.

### **Discussion of Claim Rejections under 35 USC 103**

*The Office Action has rejected claims 2, 7, 10-11, 56-59 and 62 under 35 U.S.C. 103(a), as being unpatentable over Tanada et al. (U.S. Publication No. 2002/0054257; hereafter Tanada) in view of Nakai et al. (US Patent 6,144,429, hereinafter Nakai).*

*The Office Action has also rejected claims 2, 7, 10-11, 56-59 and 62 under 35 USC 103(a) as being unpatentable over Tanada in view of Ogawa et al. (Ogawa hereinafter, U.S. Patent No. 6,122,027) and further in view of Nakai.*

In the Response to Arguments of the Office Action, the Office asserts that the color filter layer comprising overcoat layer, and the color filter layer is contiguous (though multi-colored) and it does fully cover all underlying layers, including the conformal reflective layer. Applicants respectfully disagree.

According to the definition of Wikipedia, “color filter” means that “[A] color gel or color filter (UK colour gel or colour filter), or a lighting gel or simply gel is a transparent colored material that is used in theatre, event production, photography, videography and cinematograph to color light and for color correction”.

In Tanada, the color filter 13 supposedly has the function of coloring light and for color correction. In contrast, the overcoat film 24 does not have the function of coloring light and for color correction. Accordingly, the overcoat film 24 of Tanada can not be construed as a part of the color filter 13. In fact, as taught in paragraph [0035], the overcoat film 24 of Tanada only has the function for planarizing the corrugation due to the organic film 11 and the color filters. In other words, the color filter film of Tanada has a corrugated top surface, and does not have a planar top surface as asserted by the Office. Instead, the planarity in Tanada is provided by an overcoat film.

In the claimed invention, the planar color filter layer is formed over the conformal (bumpy) reflective layer 82, and the planar color filter layer has a bottom surface that can conformably and fully covers the conformal reflective layer and has a substantially planar upper surface to thereby “smoothing out” the underlying conformal reflective layer and to **provide planarity for the first transparent conductive layer 86 formed directly thereon.** In brief, the planar color filter layer of the invention has the function of coloring light and for color correction, and furthermore the planar color filter layer has the function of planarizing the bumpy reflective layer without the assistance of an overcoat film. Applicants respectfully remind the Office that an omission of an element with retention of the element’s function is an indicia of unobviousness. See MPEP 2144.04 and *In re Edge*, 359 F.2d 896, 149 USPQ 556 (CCPA 1966).

Since Nakai also fails to teach or suggest a planar color filter layer over the conformal reflective layer, wherein the planar color filter layer has a substantially planar upper surface and a bottom surface that conformably and fully covers the conformal

reflective layer, and a first transparent conductive layer conformably and directly on the planar color filter layer, Tanada in view of Nakai fails to render the claimed invention unpatentable. Reconsideration and withdrawal of the 35 USC 103 rejection are courteously requested.

With respect to the 35 USC 103 rejection to claims 2, 7, 10-11, 56-59 and 62 by Tanada in view of Ogawa and further in view of Nakai, the Office asserts that although Tanada does not explicitly disclose 1) a color filter layer NOT comprising an overcoat layer, and 2) that the first conductive layer is connected to the TFT for controlling the liquid crystal layer, Ogawa teaches a display having color filters that do not comprise an overcoat layer. The Office further asserts that it is evidenced, based on Ogawa, to add color filters that do not comprise an overcoat layer as an art recognized color filter suitable for the purpose of producing color display, and this proves that the overcoat layer of Tanada is optional.

Ogawa teaches a display having color filters that do not comprise an overcoat because the color filter of Ogawa has a planar bottom surface; and accordingly, the upper surface of the color filter of Ogawa is also correspondingly planar. However, the corrugated reflective layer in Tanada is used for improve reflectivity. Accordingly, there is no motivation to combine Tanada with Ogawa to reduce the reflectivity, since reflectivity of Ogawa without bumpy surface is relatively lower than that of Tanada. Hence, the application of an overcoat layer, as taught by Tanada for planarizing the corrugation due to the organic film and the color filters, can become optional in Ogawa.

In other words, the teachings of Ogawa and Tanada suggest that when the color filter film does not have a planar bottom surface (and the upper surface thereof is also non-planar), an overcoat layer is required for planarization, whereas when the color filter film does have a planar bottom surface, an overcoat film can be optional. The present invention, however, teaches that even the planar color filter layer has a bumpy bottom surface, i.e. does not have a planar bottom surface, the application of an overcoat film can still be obviated.

Further, as admitted by the Office, Ogawa teaches color filters that do not comprise an overcoat layer. In other words, color filters do not automatically imply an overcoat layer is included. Hence, the Office's assertion that a color filter layer means a color filter film plus an overcoat layer is inappropriate.

In view of the foregoing, Applicants respectfully submit that even if Ogawa is combined with Tanada and Nakai, the combination still fails to explicitly teach or implicitly suggest each and every element of 56. Since claims 57-59 and 62-66 are dependent claims, which further define the invention recited in claim 56, Applicants respectfully assert that these claims also are in condition for allowance. Thus, reconsideration and withdrawal of this rejection are respectively requested.

**Newly Added Claim**

Applicants have newly added independent claim 67 to provide the subject application with independent claims of varying scope and to more clearly claim *a planar color filter layer over the conformal reflective layer, wherein the planar color filter layer*

*has a substantially planar upper surface and a bottom surface that conformably covers the conformal reflective layer; a contact via configured in the planar color filter layer, the conformal reflective layer and the organic insulating film; a first transparent conductive layer over the planar color filter layer, wherein the first transparent conductive layer is connected to a thin film transistor through the contact via in the planar color filter layer, the conformal reflective layer and the organic insulating film, and a first terminal of the thin film transistor is configured in the planar color filter layer while a second terminal of the thin film transistor is configured in the organic insulating layer.*

It is respectfully submitted that the LCD structure defined by claim 67 is neither disclosed nor suggested by the cited art of record, and is in condition for allowance for at least the above reasons supporting claim 56, as is described above. Further, none of the cited reference teaches a contact via (i.e. a contact hole) configured in the color filter layer, the conformal reflective layer and the organic insulating film. Additionally, none of the cited reference teaches a first terminal of the TFT is being configured in the color filter layer while a second terminal of the TFT is being configured in the organic insulating layer. Accordingly, Applicants submit that claim 67 is in condition for allowance.

**CONCLUSION**

For at least the foregoing reasons, it is believed that the pending claims 56-59 and 62-67 are in proper condition for allowance. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

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Respectfully submitted,

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